

Amendments to the Specification

Please replace the paragraph beginning at page 2, line 25 with the following amended paragraph:

Generally, volatile components can be separated from a liquid by air stripping or ~~vapour~~ vapor stripping, such as e.g. steam stripping of ammonia from aqueous solutions, or e.g. steam stripping of methanol.

Please replace the paragraph beginning at page 2, line 27 with the following amended paragraph:

Methods and systems for ~~vapour~~ vapor stripping of volatile components from liquids comprise steps and means for producing a ~~vapour~~ vapor of volatile components, such as ammonia, from the liquid. Typically, evaporation means requires energy from a suitable heating medium, typically a heating medium of high value such as e.g. electricity or combustion fuel, whereas available on-site heating media often are low-valued heating media such as cooling media comprising otherwise wasted heat from e.g. combustion of organic waste gases in an engine.

Please replace the paragraph beginning at page 3, line 1 with the following amended paragraph:

For effective removal of volatile components from liquids at atmospheric pressure, large amounts of steam or heat are required. Consequently, typical ~~vapour~~ vapor stripping apparatus comprises large, energy consuming, and expensive components, which are not suited for small in-situ liquid treatment systems, such as system for treatment of liquids of manure at animal farming sites.

Please replace the paragraph beginning at page 6, line 4 with the following amended paragraph:

The present invention in a first aspect provides a method and a system for stripping ammonia from liquid medium comprising ammonia or precursors thereof, such as e.g. liquids in biogas reactors. Part of the ammonia is stripped from the liquid in a stripper system comprising a shunt through which liquid such as e.g. fermentation medium comprising a biomass can be diverted in the form of a side stream in liquid contact with a main fermentor(s). The stripper system is connected to an evaporator. In the evaporator aqueous liquid is heated at a pressure below atmospheric pressure whereby ~~vapour~~ vapor is developed at a temperature below 100°C.

Please replace the paragraph beginning at page 6, line 13 with the following amended paragraph:

The ~~vapour~~ vapor from the evaporator is directed to the liquid medium comprising ammonia and this results in ammonia being stripped from the liquid and transferred to the ~~vapour~~ vapor phase. The ~~vapour~~ vapor phase is condensed in a first condenser at a low pressure, e.g. a pressure below 1 bar, such as a pressure of less than 0.5 bar, and the liquid thus obtained can be further treated in a stripper unit at a high pressure, such as e.g. a pressure at or above 1 bar, but preferably below 5 bar, said treatment resulting in the generation of a more concentrated ammonia comprising fluid or liquid. When stripped for at least a substantial part of the ammonia the liquid initially obtained from the biogas reactor and diverted to the shunt can be returned to the reactor.

Please replace the paragraph beginning at page 7, line 4 with the following amended paragraph:

Vapour Vapor stripping means stripping of volatile compounds from a media by directing ~~vapour~~ vapor through the medium.

Please replace the paragraph beginning at page 10, line 1 with the following amended paragraph:

One step of the process step of the invention involves a first condensing device (K1). This step generates a first condensed aqueous liquid and a ~~vapour~~ vapor not condensed by the first condensing device. The first condensing device operates at a low pressure below said predetermined reference pressure, preferably a reference pressure of 1 bar. ~~Vapour~~ Vapor not condensed by the first condensing device is optionally diverted in a further process step to a further condensing device (K2) at a pressure below the predetermined reference pressure. The objective is to remove a substantial part of the remaining volatile compounds such as e.g. ammonia from said ~~vapour~~ vapor not condensed by the first condensing device. The objective is achieved by including a washing step using a counter current of aqueous liquid, obtaining an aqueous liquid fraction comprising volatile compounds such as e.g. ammonia and optionally ~~vapour~~ vapor not condensed by the further condensing device.

Please replace the paragraph beginning at page 11, line 26 with the following amended paragraph:

The generated ~~vapour~~ vapor /steam comprising volatile compounds such as e.g. ammonia preferably comprises about 1-10% volatile compounds such as e.g. ammonia, such as 2-10% volatile compounds such as e.g. ammonia, for example 3-10% volatile compounds such as e.g. ammonia, such as 4-10% volatile compounds such as e.g. ammonia, for example 5-10% volatile compounds such as e.g. ammonia, such as 5-9% volatile compounds such as e.g. ammonia, for example 5-8% volatile compounds such as e.g. ammonia, such as 5-7% volatile compounds such as e.g. ammonia, such as 6-10% volatile compounds such as e.g. ammonia, for example 7-10% volatile

compounds such as e.g. ammonia, such as 8-10% volatile compounds such as e.g. ammonia, for example 9-10% volatile compounds such as e.g. ammonia, such as 1-9% volatile compounds such as e.g. ammonia, for example 1-8% volatile compounds such as e.g. ammonia, such as 1-7% volatile compounds such as e.g. ammonia, for example 1-6% volatile compounds such as e.g. ammonia, such as 1-5% volatile compounds such as e.g. ammonia, for example 1-4% volatile compounds such as e.g. ammonia, such as 1-3% volatile compounds such as e.g. ammonia, for example 1-2% volatile compounds such as e.g. ammonia, such as 2-4% volatile compounds such as e.g. ammonia, for example 4-6% volatile compounds such as e.g. ammonia, such as 6-8% volatile compounds such as e.g. ammonia, for example 8-10% volatile compounds such as e.g. ammonia, such as 2-3% volatile compounds such as e.g. ammonia, for example 3-4% volatile compounds such as e.g. ammonia, such as 4-5% volatile compounds such as e.g. ammonia, for example 5-6% volatile compounds such as e.g. ammonia, such as 6-7% volatile compounds such as e.g. ammonia, for example 7-8% volatile compounds such as e.g. ammonia, such as 8-9% volatile compounds such as e.g. ammonia, and this steam is subsequently condensed at a low, first pressure (in K1) and further concentrated (stripped) at higher second pressure (in K3) to achieve preferably a solution of as much as 25% volatile compounds such as e.g. ammonia in aqueous liquid, such as for example 22% volatile compounds such as e.g. ammonia in aqueous liquid, for example 20% volatile compounds such as e.g. ammonia in aqueous liquid, for example 18% volatile compounds such as e.g. ammonia in aqueous liquid, for example 16% volatile compounds such as e.g. ammonia in aqueous liquid, for example 14% volatile compounds such as e.g. ammonia in aqueous liquid, for example 12% volatile compounds such as e.g.

ammonia in aqueous liquid, for example 10% volatile compounds such as e.g. ammonia in aqueous liquid, for example 8% volatile compounds such as e.g. ammonia in aqueous liquid, and preferably a solution of more than 5% volatile compounds such as e.g. ammonia in aqueous liquid.

Please replace the paragraph beginning at page 14, line 11 with the following amended paragraph:

4. The disclosed system also makes it possible to control the temperature in the biogas reactors. If the vacuum of the shunt is set somewhat lower than the ~~vapeur~~ vapor pressure of the active biomass, a net evaporation from the biomass will occur thus lowering the temperature of the active biomass (to be returned to the bioreactor). On the other hand, if the vacuum of the shunt is set somewhat higher than the ~~vapeur~~ vapor pressure of active biomass a net condensation will occur thus increasing the temperature of the biomass (to be returned to the bioreactor).

Please replace the paragraph beginning at page 14, line 29 with the following amended paragraph:

If the process involves a heat exchanger between slurry in a slurry tank and wastewater or aqueous liquid, the pressure in the slurry tank is preferably higher than the ~~vapeur~~ vapor pressure of the slurry, but lower than the steam ~~vapeur~~ vapor in the steam generator. In this case the generated cold steam will effectively condensate in the slurry and thus release the heat to the slurry.

Please replace the paragraph beginning at page 17, line 1 with the following amended paragraph:

In a further aspect there is provided a system for reducing the concentration of volatile compounds in a liquid.

Examples of volatile compounds include any compound capable of being stripped off a liquid media by ~~vapour~~ vapor stripping/heating, optionally ~~vapour~~ vapor stripping/heating under reduced pressure (i.e. below 1 bar), and subsequently collected by condensation of the ~~vapour~~ vapor/steam generated as a result of the stripping/heating process. One example of a volatile compound is ammonia. Another example of volatile compounds is amines. Systems according to the invention can be designed for stripping off one or more volatile compounds present in a liquid medium. In one preferred embodiment the system is designed for stripping off ammonia from an aqueous liquid.

Please replace the paragraph beginning at page 18, line 1 with the following amended paragraph:

The condensates obtained with the present invention are obtained as a result of cooling of ~~vapour~~ vapor/steam and not by compression.

Please replace the paragraph beginning at page 18, line 16 with the following amended paragraph:

The pressure in the degassing unit depends on the temperature of the organic material being diverted to the pre-degassing unit. For a given temperature, the pressure in the pre-degassing unit will be higher than the pressure at which water boils at the temperature selected. Typically the pressure will be in the range of from 0.15 to 0.30 bar. The temperature in the pre-degassing unit will be above the boiling point of saturated aqueous ~~vapour~~ vapor at the pressure in question.

Please replace the paragraph beginning at page 21, line 21 with the following amended paragraph:

Vapour Vapor not condensed in the first condensing device K1 at the reduced pressure can optionally be diverted to a further condensing K2 device for condensation by washing in a liquid counter current. The condensed volatile compounds generated by condensation in the further condensing device K2 can subsequently be diverted to the stripper unit K3 e.g. together with first condensed aqueous liquid generated by condensation in said first condensing device K1. Vapour Vapor not condensed in the further condensing device can optionally be diverted to an air scrubber.

Please replace the paragraph beginning at page 22, line 11 with the following amended paragraph:

f) pumps, valves and pipes for diverting said cold volatile compound-comprising steam at said pressure below the predetermined reference pressure to the first condensing device, and condensing in a first condensing step in said first condensing device said cold volatile compound-comprising steam at said pressure below a predetermined reference pressure, thereby obtaining a first condensed aqueous liquid medium comprising said volatile compounds and vapour vapor not condensed by the first condensing device, and,

Please replace the paragraph beginning at page 23, line 16 with the following amended paragraph:

f) pumps, valves and pipes for diverting said cold volatile compound-comprising steam at said pressure below a predetermined reference pressure to the first condensing device, and condensing in a first condensing step in said first condensing device said cold volatile compound-comprising steam by said pressure below a predetermined reference pressure, thereby obtaining a first condensed aqueous liquid

medium comprising said volatile compounds and ~~vapour~~ vapor not condensed by the first condensing device, and

g) optionally pumps, valves and pipes for diverting said ~~vapour~~ vapor not condensed by the first condensing device to the further condensing device, when present, and removing a substantial part of the remaining volatile compounds from said ~~vapour~~ vapor not condensed by the first condensing device, said removal involving washing the ~~vapour~~ vapor in a counter current of aqueous liquid, thereby obtaining an aqueous liquid fraction comprising volatile compounds and ~~vapour~~ vapor not condensed by the further condensing device, and

Please replace the paragraph beginning at page 24, line 19 with the following amended paragraph:

When the volatile compound is ammonia, the second condensed aqueous liquid (obtained from condensation of the hot ~~vapour~~ vapor generated by the end-stripper unit) preferably comprises less than 10000 ppm ammonia, such as e.g. 5000 ppm ammonia, for example 4000 ppm ammonia, such as e.g. 3000 ppm ammonia, for example 2000 ppm ammonia, such as e.g. 1000 ppm ammonia, for example 800 ppm ammonia, such as e.g. 700 ppm ammonia, for example 600 ppm ammonia, such as e.g. 500 ppm ammonia, for example 400 ppm ammonia, such as e.g. 300 ppm ammonia, for example 250 ppm ammonia, such as e.g. 200 ppm ammonia, for example 150 ppm ammonia, such as e.g. 100 ppm ammonia, for example 80 ppm ammonia, such as e.g. 70 ppm ammonia, for example 60 ppm ammonia, such as e.g. 50 ppm ammonia, for example 40 ppm ammonia, such as e.g. 30 ppm ammonia, for example less than 20 ppm ammonia, such as less than 10 ppm ammonia.

Please replace the paragraph beginning at page 27, line 16 and ending at page 28, line 16 with the following amended paragraph:

The system can further comprise at least one ~~vapour~~ vapor evacuation pumps for evacuating ~~vapour~~ vapor for producing said pressure below a predetermined reference pressure,

In yet another embodiment there is provided a stripper device comprising:

(A) a first stripping unit, said first unit comprising:

(a) a stripping container for producing a ~~vapour~~ vapor of volatile components from the liquid at a reduced pressure below a predetermined reference pressure;

(b) a first condensing device for condensing said ~~vapour~~ vapor of volatile components from said stripping container at said reduced pressure;

(c) a phase separator for separating said condensed volatile components and said ~~vapour~~ vapor of volatile components from said first condenser into a condensed phase and a ~~vapour~~ vapor phase at said reduced pressure; and

(d) at least one ~~vapour~~ vapor evacuation pumps for evacuating said ~~vapour~~ vapor for producing a reduced pressure below said reference pressure; said ~~vapour~~ vapor evacuation pumps being positioned down stream said first condenser; and

(B) a second stripping unit, said unit comprising:

(e) a second stripping container for producing a vapeur vapor of volatile components from said condensed phase at said predetermined reference pressure; and

(f) a second condensing device for condensing said vapeur vapor of volatile components at said predetermined reference pressure,

whereby it is obtained that heating media of low-value can be used for heating of the volatile components in the vacuum stripping process.

Please replace the paragraph beginning at page 28, line 28 with the following amended paragraph:

Also, since main stream vapeur vapor compressor can be avoided, simpler and less expensive vapeur vapor compressors can be used.

Please replace the paragraph beginning at page 29, line 13 with the following amended paragraph:

Consequently, in a preferred embodiment, said at least one vapeur vapor evacuation pumps is connected to said phase separator whereby it is obtained that dissolved gasses can be removed.

Please replace the paragraph beginning at page 29, line 17 with the following amended paragraph:

The vapeur vapor evacuation pumps can be any suitable pumps for pumping the gasses in question. Consequently, in a preferred embodiment, said at least one vapeur vapor evacuation pumps is a displacement vacuum pump whereby removal of gas using a relatively inexpensive energy compressor with low energy demand is obtained.

Please replace the paragraph beginning at page 29, line 26 with the following amended paragraph:

Consequently, in a preferred embodiment, said first stripping container comprises; a container, an inlet, a heating means, a ~~vapour~~ vapor outlet, a residue outlet, and internals, e.g. loose and fixed packing materials and plate-providing means such as a strainer; said container, inlet, ~~vapour~~ vapor outlet, residue outlet, and internals being adapted to operate at a reduced pressure below said reference pressure.

Please replace the paragraph beginning at page 30, line 29 with the following amended paragraph:

In a preferred embodiment, the system comprises means for converting heat produced by combustion of said combustion gas to produce a ~~vapour~~ vapor of volatile components in a stripping container of said ~~vapour~~ vapor stripping apparatus, in particular according to the invention.

Please replace the paragraph beginning at page 31, line 10 with the following amended paragraph:

The systems described herein above can further comprise a first phase separator operating at said pressure below a predetermined reference pressure, for separating said first condensed aqueous liquid medium comprising ammonia and ~~vapour~~ vapor not condensed by the first condensing device.

Please replace the paragraph beginning at page 31, line 15 with the following amended paragraph:

The systems can comprise a further condensing device, whereto said ~~vapour~~ vapor not condensed by the first condensing device is diverted at said pressure below a predetermined reference pressure, removing a substantial part of the remaining ammonia by washing in a counter current of

aqueous liquid medium, and obtaining a aqueous liquid fraction comprising ammonia and ~~vapour~~ vapor not condensed by the further condensing device.

Please replace the paragraph beginning at page 31, line 32 with the following amended paragraph:

The system can further comprise a second phase separator for separating said second condensed aqueous liquid medium comprising ammonia and ~~vapour~~ vapor not condensed by the condensing device.

Please replace the paragraph beginning at page 32, line 1 with the following amended paragraph:

The systems can further comprise at least one air scrubber for cleaning said ~~vapour~~ vapor not condensed by the condensing device(s), as well as cooling tower(s) for cooling aqueous liquid by evaporation to the atmosphere, and preferably also a storage container for storing said second condensed aqueous liquid medium comprising ammonia.

Please replace the paragraph beginning at page 32, line 30 with the following amended paragraph:

The pumps of the system are capable of pumping liquid medium or ~~vapour~~ vapor through said connecting means.

Please replace the paragraph beginning at page 39, line 26 with the following amended paragraph:

In a preferred embodiment the cold steam for the stripping process is produced by means of vacuum over a surface of warm aqueous liquid. This takes place in the evaporator. The temperature of the aqueous liquid in the evaporator is preferably maintained by means of e.g. cooling aqueous liquid from a motor-generator unit in a biogas plant,

or alternatively, from any other waste heat source or motor-generator. The waste heat, in the form of warm aqueous liquid, can be present at temperatures as low as 60-70°C. Aqueous liquid at higher temperatures may also be used, however, in such cases the ~~vapeur~~ vapor has to be cooled to temperatures suitable to the microorganisms in the biogas reactor, i.e., at a maximum of 65°C and preferably at a temperature close to the operating temperature of the bioreactor.

Please replace the paragraph beginning at page 41, line 2 with the following amended paragraph:

The present invention is disclosed herein below with respect to one or more condensing devices for condensing steam and ~~vapeurs~~ vapors comprising volatile compounds including ammonia and volatile amines

Please replace the paragraph beginning at page 41, line 12 with the following amended paragraph:

In one embodiment the invention provides for the generation of a ~~vapeur~~ vapor comprising volatile compounds including e.g. ammonia, which ~~vapeur~~ vapor is not condensed by the first condensing device, and said ~~vapeur~~ vapor not condensed by the first condensing device can subsequently be diverted to a further condensing device at said pressure below a predetermined reference pressure, removing at least a substantial part of the remaining ammonia as possible from said ~~vapeur~~ vapor not condensed by the first condensing device. This is possible by including a washing step exploiting a counter current of aqueous liquid, said washing step and said condensation resulting in an aqueous liquid fraction comprising ammonia and ~~vapeur~~ vapor not condensed by the further condensing device.

Please replace the paragraph beginning at page 41, line 30 with the following amended paragraph:

The hot ammonia-comprising steam obtained as described herein immediately above is diverted to a second condensing device capable of condensing said hot ammonia-comprising steam at or above said reference pressure, thereby obtaining a further condensed aqueous liquid medium comprising ammonia and optionally also ~~vapour~~ vapor not condensed by the second condensing device.

Please replace the paragraph beginning at page 42, line 1 with the following amended paragraph:

The ~~vapour~~ vapor not condensed by the further condensing device and/or the second condensing device can be directed to an air scrubber or released directly to the atmosphere.

Please replace the paragraph beginning at page 45, line 9 with the following amended paragraph:

E: The cold steam for the stripping process is produced in the evaporator E by means of vacuum over a surface of warm aqueous liquid. The temperature of the aqueous liquid in the evaporator E is preferably maintained by means of e.g. cooling aqueous liquid from a motor-generator unit in a biogas plant, or alternatively, from any other waste heat source. The waste heat, in the form of warm aqueous liquid, can be present at temperatures as low as 60-70°C. Aqueous liquid at higher temperatures may also be used, however, in such cases the ~~vapour~~ vapor has to be cooled to temperatures suitable to the microorganisms in the biogas reactor, i.e., at a maximum of 65°C and preferably at a temperature close to the operating temperature of the bioreactor.

Please replace the paragraph beginning at page 46, line 5 with the following amended paragraph:

K2: The ~~vapeur~~ vapor not condensed in K1 can optionally be diverted to the condensing device K2, where it is washed in a counter current of aqueous liquid in order to remove a substantial part of the remaining ammonia. The ~~vapeur~~ vapor remaining after the washing process can be diverted to a vacuum pump and further to a conventional air scrubber or directly to the atmosphere.

Please replace the paragraph beginning at page 46, line 18 with the following amended paragraph:

K4: The concentrated ammonia/steam ~~vapeurs~~ vapors from the stripper unit K3 comprising hot ammonia-comprising steam are condensed in the second condensing device K4 by means of cooling aqueous liquid in a cooling tower, preferably to a 25% ammonia/aqueous liquid solution.

Please replace the paragraph beginning at page 46, line 23 with the following amended paragraph:

B2: The second condensed aqueous liquid medium comprising ammonia and ~~vapeur~~ vapor not condensed by the second condensing device from K4 can be separated in the phase separator B2, and the second condensed aqueous liquid medium comprising ammonia is diverted to a storage tank and the ~~vapeur~~ vapor not condensed by the second condensing device is diverted e.g. to an air scrubber or directly to the atmosphere.

Please replace the paragraph beginning at page 48, line 1 with the following amended paragraph:

27	Pipe between H2 and H4
28	Pipe between E and pump 6
29	Pipe between E, pump 6 and H6, H3
30	Pipe between E and H6, H3.
31	Pipe between K2 and pump 7
32	Pipe from S to bioreactor R
33	Pipe between S and K1
34	Pipe between H3 and K3
35	Pipe between H3 and H4
36	Pipe from H4 to an ammonia storage tank via a phase separator B2
37	Pipe between pump 7 and K3.
38	Pipe between H6 and external supply of waste heat
39	Pipe for return of cooled water between H6 and external heat source
40	Vacuum manifold to K2
41	Water supply to S
42	Exhaust vapour <u>vapor</u> from vacuum blowers to air scrubber

Please replace the paragraph beginning at page 48, line 16 with the following amended paragraph:

3. Evaporator E. The cold steam for the stripping process is produced by means of vacuum over a surface of warm aqueous liquid. This takes place in the evaporator E. The temperature of the aqueous liquid in the evaporator E is preferably maintained by means of e.g. cooling aqueous liquid from a motor-generator unit in a biogas plant, or alternatively, from any other waste heat source. The waste heat, in the form of warm aqueous liquid, can be present at

temperatures as low as 60-70°C. Aqueous liquid at higher temperatures may also be used, however, in such cases the vapeur vapor has to be cooled to temperatures suitable to the microorganisms in the bioreactor. For a biogas reactor co-digesting animal manures with any other organic biomass the maximum temperature is 65°C and the running temperature shall be close to the operating temperature of the biogas reactor, i.e. preferably between 55-60°C.

Please replace the paragraph beginning at page 49, line 27 with the following amended paragraph:

9. Heat exchangers H3. H4. H5. H6. The H3 and H4 cool vapeur vapor from K3. The hot ammonia-comprising steam from K3 are condensed in the heat exchanger condensator H3 and H4 comprising the second condensing device K4. i.e., the condensation is split in two (H3 and H4) so as to re-circulate heat into the evaporator E. In H4 the remaining vapeur vapor from H3 are again condensed by means of cooling aqueous liquid in a cooling tower, to preferably a 25% ammonia/aqueous liquid solution. H5 cools a liquid from an external heat source, e.g., from a final stripping step in a complete biogas and refinement plant. H6 cools liquid from an external heat source, e.g. from a motor-generator plant fuelled by biogas from a complete biogas plant.

Please replace the paragraph beginning at page 50, line 4 with the following amended paragraph:

10. First condensing device K1. In the shunt S, where cold steam is directed through the liquid medium comprising ammonia and thereby removing a part of its ammonia content, the produced mixture of steam and ammonia constituting cold ammonia-comprising steam is diverted from the stripper device S to the first condensing device K1, where the cold ammonia-

comprising steam is condensed to a dilute ammonia/aqueous liquid constituting the first condensed aqueous liquid medium comprising ammonia solution by means of cooling aqueous liquid in a cooling tower. The ~~vapour~~ vapor not condensed in the K1 is optionally diverted to the further condensing device K2 where it is washed in a counter current of aqueous liquid in order to remove at least part of the remaining ammonia. The remaining ~~vapour~~ vapor is first diverted to a vacuum pump and further diverted to a conventional air scrubber or directly to the atmosphere. Here the CO₂ is also emitted to the atmosphere. This is important because the final N-fertilizer is free of bicarbonate and thus a stable product in the form of ammonia and/or ammonium sulphate.

Please replace the paragraph beginning at page 51, line 32 with the following amended paragraph:

36. Pipe connection from H4 to an ammonia storage tank via a phase separator B2. The second condensed aqueous liquid medium comprising ammonia and ~~vapour~~ vapor not condensed by the second condensing device from K4 are separated in a phase separator B2, where the aqueous liquid medium comprising ammonia is diverted to a storage tank and the ~~vapour~~ vapor not condensed by the second condensing device to an air scrubber or directly to the atmosphere.

Please replace the paragraph beginning at page 52, line 18 with the following amended paragraph:

42. Exhaust ~~vapour~~ vapor from vacuum blowers to air scrubber.

Please replace the paragraph beginning at page 52, line 21 with the following amended paragraph:

Figure 3 illustrates yet another embodiment of the stripper device of the invention. The device comprises a first

stripping unit 210 and a second stripping unit 215, said units being connected by conduits so that ~~vapour~~ vapor, here about 5% by weight of NH₃ at about 50 °C, from the first stripping column 210 is condensed by a first condenser 212. Subsequently the condensate and ~~vapour~~ vapor is separated into a condensed phase and a ~~vapour~~ vapor phase at said reduced pressure in a phase separator 213. The condensed phase, here about 5% by weight of NH₃ at about 30-40 °C, is pumped to said second stripping unit 215 at a reference pressure, here atmospheric pressure (1000 kPa), by means of pump 217. In the second stripping unit, the condensed phase is further stripped to produce a ~~vapour~~ vapor of about 25% by weight of NH₃ at a temperature of about 80 °C in the top of the second stripping column. Subsequently this ~~vapour~~ vapor phase is condensed in a second condenser 216 to a temperature at about 30 °C.

Please replace the paragraph beginning at page 53, line 6 with the following amended paragraph:

Said first stripping unit 210 comprises a stripping container 211 for producing a ~~vapour~~ vapor of volatile components from the liquid at a reduced pressure, here e.g. 200 to 800 hPa below a predetermined reference pressure, here preferably atmospheric pressure. Heat is supplied by a heating means; here a heat exchanger placed at the bottom end of the stripping column 210, which heat exchanger here uses cooling water from the biogas production section of organic waste water treatment plant.

Please replace the paragraph beginning at page 53, line 22 with the following amended paragraph:

Selecting a proper balance between the energy sources available at the plant site, e.g. either a source of low valued energy such as cooling water or a high valued energy such as combustion heat or electricity, and the involved

temperatures and pressures in generating the vapour vapor and condensate, a skilled person can provide an optimum design for the apparatus for vapour vapor stripping of volatile components from a liquid, e.g. for generating vapour vapor of said volatile components.

Please replace the paragraph beginning at page 53, line 30 with the following amended paragraph:

In a preferred embodiment of the apparatus, heat at about 80 °C is supplied to the column at a rate providing a warm vapour vapor of about 5% by weight of NH₃ at a temperature of about 50 °C at the outlet of the column and of a pressure of about 200 kPa.

Please replace the paragraph beginning at page 54, line 1 with the following amended paragraph:

A first condenser 212, here a plate type condenser especially suited to resist basic conditions of ammonia which is generally available from chemical engineering suppliers, is used for condensing said vapour vapor of volatile components from said stripping container at said reduced pressure.

Please replace the paragraph beginning at page 54, line 6 with the following amended paragraph:

A phase separator 213 separates said condensed volatile components and said vapour vapor of volatile components from said first condenser 212 into a condensed phase and a vapour vapor phase at said reduced pressure.

Please replace the paragraph beginning at page 54, line 10 with the following amended paragraph:

At least one vapour vapor evacuation pumps 214, here preferably a displacement pump generally available from chemical engineering suppliers, is used for removing dissolved

gasses such as carbon dioxide and nitrogen and producing a reduced pressure below said reference pressure; said ~~vapour~~ vapor evacuation pumps being positioned down stream said first condenser. ~~Vapour~~ Vapor gasses are taken out from the ~~vapour~~ vapor phase of the phase separator 213 to final scrubbing before being released to the atmosphere (not shown).

Please replace the paragraph beginning at page 54, line 18 with the following amended paragraph:

Said a second stripping unit 215 comprises a second stripping container 215 for producing a ~~vapour~~ vapor of volatile components from said condensed phase at said predetermined reference pressure.

Please replace the paragraph beginning at page 54, line 31 with the following amended paragraph:

Said second stripping unit further comprises a second condenser 216 for condensing said ~~vapour~~ vapor of volatile components at said predetermined reference pressure. This second condenser is preferably prepared by same and/or similar methods and means to those used for said first condenser 212.

Please replace the paragraph beginning at page 62, line 19 with the following amended paragraph:

The alkali pressure sterilization and hydrolysis unit preferably comprises an elongated chamber with inlet(s) and outlet(s) port(s) for the organic material. A stirrer is located in the center of the elongated chamber. Hot ~~vapour~~ vapor/steam is used for heating the organic material. The steam can be entered directly into the chamber.